

Introduction

Excerpted From: Does Professional Development Change Teaching Practice? Results From a Three-Year Study

U.S Department of Education, Office of the Under Secretary

What are the characteristics of professional development that improve teaching practice? This report addresses that question, using data from the National Evaluation of the Eisenhower Professional Development Program. The Eisenhower program is part of the federal government's efforts to support education reform based on high standards. The success of standards-based reforms depends on teachers' ability to foster both basic knowledge and advanced thinking and problem solving among their students (Loucks-Horsley, Hewson, Love, & Stiles, 1998; National Commission on Teaching & America's Future, 1996), and such effective practices require teachers to have a deep understanding of the content they teach (Ma, 1999). Professional development is considered an essential mechanism for deepening teachers' content knowledge and developing their teaching abilities. As a result, it is a cornerstone of systemic reform efforts designed to increase teachers' capacity to teach to high standards (Smith & O'Day, 1991).

The Eisenhower Professional Development Program, Title II of the Elementary and Secondary Education Act (ESEA), is the federal government's largest investment that is solely focused on developing the knowledge and skills of classroom teachers. The program is a primary means for helping schools and school districts across the nation meet the U.S. Department of Education's objective of ensuring that a "talented and dedicated teacher is in every classroom in America" (U.S. Department of Education,

1999c). Part B of the program, with a FY 2000 appropriation of \$335 million, provides funds through state education agencies (SEAs) to school districts and through state agencies for higher education (SAHEs) to institutions of higher education

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and nonprofit organizations (SAHE grantees). These funds primarily support professional development in mathematics and science, but also in other content areas. The goal of the Eisenhower Professional Development Program is to support professional development experiences for teachers that enhance classroom teaching and, ultimately, improve student learning.

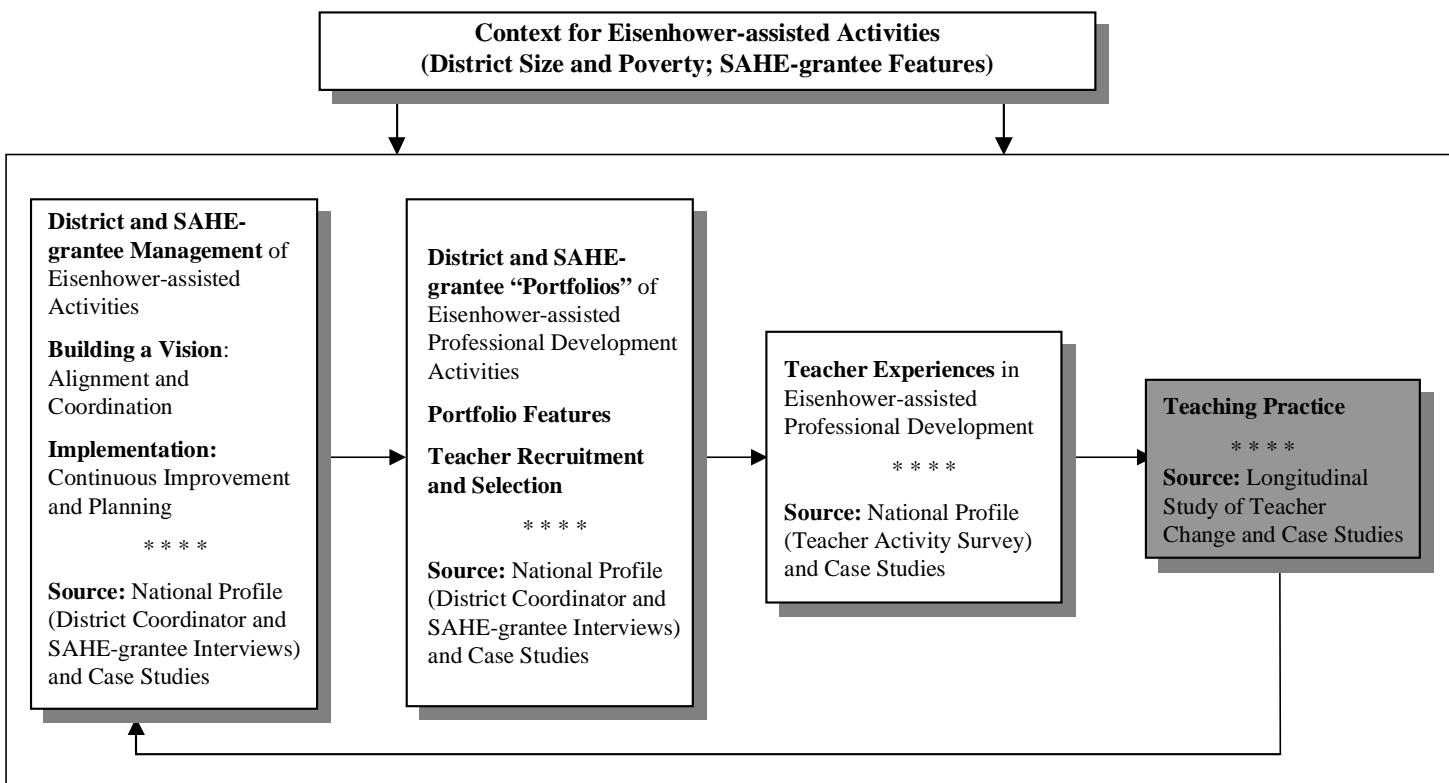
This report focuses on the effects of professional development on improving classroom teaching practice.¹ Using a purposefully selected sample of teachers in 30 schools, in 10 districts, in 5 states, we examine the quality of teachers' professional development in Eisenhower and other professional development activities and its effects on changing teaching practice in mathematics and science from 1996–1999.

This is the third in a series of reports based on a multiyear evaluation of the Eisenhower Program, conducted by the American Institutes for Re-

search (AIR) under contract with the U.S. Department of Education's Planning and Evaluation Service.² The national Evaluation of the Eisenhower Program, begun in 1996, includes three strands of data collection, each with unique strengths:

- (1) The *National Profile*, which collected data from national probability samples of district Eisenhower coordinators, SAHE-grantee project directors, and teachers who participated in Eisenhower-assisted professional development (i.e., activities sponsored in full or in part by Eisenhower funds). This component of the evaluation provided data that are generalizable to all districts receiving Eisenhower funds, all teachers who participate in Eisenhower-assisted professional development, and all SAHE-grantee projects.
- (2) The *Case Studies*, which provided detailed information about how the Eisenhower program operates in 10 schools districts—two school districts in each of five states: Kentucky, New York, Ohio, Texas, and Washington. Data from this component provided a detailed context for interpreting the quantitative findings.
- (3) The *Longitudinal Study of Teacher Change*, which surveyed all mathematics and science teachers in 30 schools—three schools (one elementary, one middle and one high school) in each of the 10 case-study districts—at three points in time.³ These data allow us to examine teachers' professional development and teaching

Exhibit 1.
Conceptual Framework for the National Evaluation of the Eisenhower Professional Development Program



practice over time. This report draws on the survey data from our Longitudinal Study of Teacher Change (LSTC) and augments the results from our earlier work based on the National Profile and Case Studies. Although the National Eisenhower Evaluation as a whole was designed to focus on several research questions addressing the type and quality of Eisenhower activities, who participates in them, how they fit into other reform efforts, and how they are managed and implemented, this report focuses on one particular research question:

Do teachers' experiences in Eisenhower-assisted profes-

sional development activities, in the context of other professional development activities, contribute to changes in teaching practice?

The LSTC was not based on a national sample; it was a purposefully selected sample of teachers in 30 schools, in 10 districts, in 5 states. The LSTC examined the quality of teachers' professional development in Eisenhower and other professional development activities and the effects of professional development on changing teaching practice in mathematics and science from 1996 to 1999.

Exhibit 1 illustrates the conceptual framework for the entire national evaluation and

highlights where the Longitudinal Study of Teacher Change fits into the overall study. Starting with the box on the far right, we show that improving teaching practice is the goal of the Eisenhower legislation. From the next box on the left, we see that teacher experiences in Eisenhower-assisted professional development activities are intended to improve teaching practice. The quality of the activities that districts and SAHE grantees make available, and the ways that districts and SAHE grantees select teachers to participate, in turn influence teacher experiences in Eisenhower-assisted professional development. We hypoth-

esized that the overall quality of Eisenhower-assisted activities is shaped by the degree of integration of the Eisenhower-assisted activities with other professional development and systemic reform efforts, as well as by how districts and SAHE grantees plan and evaluate Eisenhower-funded activities. This report describes the part of the evaluation that focuses on classroom teaching practice.

To describe the results of our Longitudinal Study of Teacher Change, we divide our analysis and reporting into five sections. First, we summarize the results from our national study and describe the design of the Longitudinal Study of Teacher Change and the way it builds on our national findings. Second, we describe the quality of professional development experienced by teachers in our longitudinal sample. Third, we explore the effects of professional development on teaching practice. Fourth, we examine trends in teaching practice and discuss how they inform our findings on the effectiveness of professional development in changing teachers' instruction. The fifth and last section of the report summarizes our results and suggests implications for the Eisenhower and other professional development programs to increase their effectiveness in fostering teacher change.

References

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This introduction was excerpted from the following document: U.S. Department of Education, Office of the Under Secretary, Planning and Evaluation Service, Elementary and Secondary Education Division, *Does Professional Development Change Teaching Practice? Results from a Three-Year Study, Executive Summary*, Washington, D.C. 20202.

Endnotes

1 In this report, we use the terms *teaching practice*, *classroom practice*, *classroom instruction*, and *instruction* interchangeably.

2 The first report was based on six exploratory case studies of school districts conducted at the beginning of the evaluation, in the spring of 1997. See *The Eisenhower Professional Development Program: Emerging Themes from Six Districts*, by B. F. Birman, A. L. Reeve, and C. L. Sattler, 1998, Washington, DC: U.S. Department of Education. The purpose of that report was to obtain an initial description of the Eisenhower program and the issues that it faced in different local contexts. The second report described the status of the program on several dimensions, such as features of quality and management and implementation; the report also linked these dimensions to characteristics of the professional development and to teachers' self-reported outcomes. It was based primarily on data from three national probability samples: (1) district Eisenhower coordinators, (2) Eisenhower project directors in SAHE grantees (i.e., the institutions of higher education and nonprofit organizations supported through the SAHE component of the program), and (3) teachers participating in Eisenhower-assisted professional development (i.e., professional development that was sponsored, at least in part, by Eisenhower funds). In addition, the second report drew on data from 10 in-depth case studies in five states. See *Designing Effective Professional Development: Lessons from the Eisenhower Program*, by M. Garet, B. Birman, A. Porter, L. Desimone, and R. Herman, R. with K. Suk Yoon, 1999, Washington, DC: U.S. Department of Education.

3 The Longitudinal Study of Teacher Change also included interviews and classroom observations of teachers in the 30 schools. Results of these data are reported in Garet et al., (1999).